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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,936	10/09/2003	Seo-Won Kwon	5000-1-455	7761
33942	7590	08/29/2006	EXAMINER	
CHA & REITER, LLC 210 ROUTE 4 EAST STE 103 PARAMUS, NJ 07652			LI, SHI K	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/681,936

Applicant(s)

KWON ET AL.

Examiner

Shi K. Li

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 9-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 9 recites the limitation "includes sensors" in lines 1-2 of the claim. Claim 10 recites the limitation "includes a CSMA/CA method" in line 2 of the claim. Instant specification does not describe the limitations in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. For example, drawings of instant specification do not shown sensors or CSMA/CA method. The only place where instant specification mentions sensors is the phrase "sensors may be utilized" on page 8, second paragraph.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "a second port" in line 1 of the claim. There is no first port mentioned in the claim. It is unclear whether there is at least one port (second port), or there are at least two ports (first and second ports) in the apparatus.

Claim 10 is an apparatus claim. However, claim 10 recites limitation "a CSMA/CA method" in line 2 of the claim. Claim which is intended to embrace both apparatus and method is precluded by language of 35 U.S.C 101, which set forth statutory classes of invention in alternative only, and is also invalid under 35 U.S.C. 112, second paragraph, since claim which purports to be both method and apparatus is ambiguous and therefore does not particularly point out and distinctly claim subject matter of invention. See *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. PA&I. 1990).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koonen (U.S. Patent 6,674,966 B1) in view of Deas (U.S. Patent Application Pub. 2004/0175173 A1).

Koonen discloses in FIG. 5 a optical distribution system comprising an optical network unit 72a (equivalent to signal converter of instant claim) for receiving optical signal and converting the optical signal to RF signal, and for receiving RF signal and converting the RF signal to optical signal, an optical transmission means (directional coupler) 75a. The difference between Koonen and the claimed invention is that Koonen does not teach UWB. Deas teaches in

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FIG. 1 UWB technology for wireless communication. One of ordinary skill in the art would have been motivated to combine the teaching of Deas with the optical distribution system of Koonen because UWB system provides high speed communication with low power demands. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use UWB, as taught by Deas, in the optical distribution system of Koonen because UWB system provides high speed communication with low power demands.

Regarding claim 2, Koonen teaches in FIG. 5 port 86a for receiving optical signal.

Regarding claim 3, Koonen teaches in FIG. 5 port 88a for outputting optical signal to other wireless network.

Regarding claim 4, Koonen teaches in FIG. 5 optical coupler 75a.

Regarding claim 5, Koonen teaches in FIG. 5 wavelength router 73 (equivalent to optical switch of instant claim).

Regarding claim 6, Koonen teaches in FIG. 5 controller 70.

Regarding claim 7, Koonen teaches in FIG. 6 using wavelength as destination identification.

Regarding claim 8, Koonen teaches in FIG. 6 a passive device.

Regarding claim 9, Koonen teaches in FIG. 6 multiplexer/demultiplexer 80 for sensing wavelengths.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koonen and Deas as applied to claims 1-9 above, and further in view of Darcie et al. (U.S. Patent 6,493,335 B1).

Koonen and Deas have been discussed above in regard to claims 1-9. The difference between Koonen and Deas and the claimed invention is that Koonen and Deas do not teaches

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CSMA/CA. Darcie et al. teaches in col. 10, line 28-35 the use of CSMA/CA protocol for subscribers. One of ordinary skill in the art would have been motivated to combine the teaching of Darcie et al. with the modified optical distribution system of Koonen and Deas because CSMA/CA protocol allows multiple users to dynamically share a single medium without scheduling. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use CSMA/CA protocol, as taught by Darcie et al., in the modified optical distribution system of Koonen and Deas because CSMA/CA protocol allows multiple users to dynamically share a single medium without scheduling.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

skl  
27 August 2006



**Shi K. Li**  
**Patent Examiner**